

Desmopressin improves sleep pattern in patients with nocturnal enuresis.

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Introduction

A comorbidity and a possible causality between nocturnal enuresis, sleep disorders and attention deficit-hyperactivity disorder (ADHD) has been suggested (Yeung, Dhont).

This prospective study not only evaluates the beneficial impact of desmopressin melt on sleep, ADHD-symptoms, cognition, quality of life and self-esteem in a random enuresis-population at screening, but as well if the anti-enuretic effect of 6 months desmopressin melt therapy, coincides with amelioration of sleep pattern and other comorbidities.

Material and Methods

31 patients aged 6-16 years with MNE according to the ICCS criteria, who experienced at least 4/7 wet days with proven nocturnal polyuria, defined as nocturnal diuresis >100% bladder volume for age. Patients are tested before the start of desmopressin melt and 6 months later. It is a multi-informant multi-method study, using polysomnography, questionnaires, interviews and neuropsychological testing. Partial preliminary results are now available.

Results

At screening, 9.1 % was diagnosed with the full syndrome of ADHD, 3% with the ADHD hyperactive/impulsive subtype and 18.2% met the criteria of the ADHD inattentive subtype. In total 30.3% was diagnosed with ADHD.

88% (29 of 33) patients have a disrupted sleep at the first polysomnography. They experienced greater than 5 periodic limb movements per sleep hour (PLMSindex). The PLMSindex ranged between 3.6 and 23.3, mean 10.8 +/- 4.8.

Preliminary results are available in 18(16) patients showing a significant amelioration of the nocturnal enuresis (Wilcoxon matched-pairs signed-ranks test, $p=0.002$) with 7 full responders, 6 partial responders and 3 non-responders, coinciding with a reduction of the PLMS index in all 18 patients (Wilcoxon, $p<0.001$).

Conclusion

There are increased prevalences of both PLMS index and ADHD in children with NP.

Preliminary results reveal that the anti enuretic effect of desmopressin correlates strongly with an improved sleep in children with enuresis, since they all experienced a lower PLMS index at the second polysomnography.